



# AFCTN Report 94-102

AFCTB-ID  
94-094



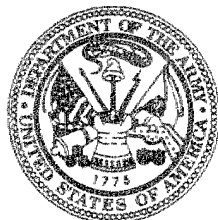
## Technical Publication Transfer Using:

Northrop Corporation's Data  
Supporting:



ASC/YSSA B-2 Program

(Contract #F33567-81-C0067/0051)



MIL-STD-1840A

MIL-D-28000A (IGES)

MIL-M-28001A (SGML)

MIL-R-28002A (Raster)

MIL-D-28003 (CGM)



Quick Short Test Report

04 July 1994



19960822 094



Prepared for  
Electronic Systems Center  
Air Force CALS Program Office  
HQ ESC/AV-2  
4027 Colonel Glenn Hwy Suite 300  
Dayton OH 45431-1672

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**Quick Short Test Report**

**04 July 1994**

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**Prepared By**

Air Force CALS Test Bed  
Wright-Patterson AFB, OH 45433

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AFCTN-94-102

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# Air Force CALS Test Bed

## *Notification of Test Results*

04 July 1994

This notice documents the results of an Air Force CALS Test Bed (AFCTB) Quick Short Test Report (QSTR) evaluation of data submitted by:

### **Northrop Corporation**

Identified as follows:

Title:	Technical Publication Transfer
Program:	B-2
Program Office:	ASC/YSSA
Contract No.:	F33567-81-C-0067/0051
QSTR No.:	AFCTB-ID 94-094

Received on the following media:      **Two 9-Track Tapes**

The results of the QSTR evaluation are as follows:

MIL-STD-1840A Standard	Pass
MIL-STD-1840A Media Format:	Pass
MIL-D-28000A IGES:	Pass
MIL-M-28001B SGML:	Pass
MIL-R-28002A Raster:	Pass
MIL-D-28003 CGM:	Pass

Formal results with associated disclaimer are documented and available from the AFCTB.

Air Force CALS Test Bed  
HQ ESC/AV-2P  
4027 Colonel Glenn Highway, Suite 300  
Dayton, OH 45431-1672  
Phone: 513-257-3085      FAX: 513-257-5881

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## 1. Introduction

### 1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

## 1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Northrop Corporation's interpretation and use of the CALS standards in transferring technical publication data. Northrop used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on two 9-track magnetic tapes.

## 2. Test Parameters

**Test Plan:** AFCTB 94-094

**Date of  
Evaluation:** 04 July 1994

**Evaluator:** George Elwood  
Air Force CALS Test Bed  
DET 2 HQ ESC/AV-2P  
4027 Colonel Glenn Hwy  
Suite 300  
Dayton OH 45431-1672

**Data  
Originator:** J.P. Kent  
Northrop Corporation  
B2 Division, M/S R213/UM  
8900 E. Washington Blvd  
Pico Rivera CA 90660  
(310) 948-0624

**Data  
Description:** Technical Manual Test  
2 Document Declaration files  
2 Document Type Definitions (DTDs)  
1 Initial Graphics Exchange Specification  
(IGES) file  
1 Text/Standard Generalized Markup Language  
(SGML) file  
1 Raster file  
1 Computer Graphics Metafile (CGM) file

**Data  
Source System:**

1840

**HARDWARE**

SUN IPX

**SOFTWARE**

Intergrated Technical Data System (ITDS) v2

IGES

**HARDWARE**

SUN IPX

**SOFTWARE**

Northrop ITDS Converter - GEF\_IGES

---

Text/SGML

**HARDWARE**  
SUN IPX  
**SOFTWARE**  
ITDS v2

Raster

**HARDWARE**  
SUN IPX  
**SOFTWARE**  
ITDS v2

CGM

**HARDWARE**  
SUN IPX  
**SOFTWARE**  
Northrop B2 ITDS GEF

**Evaluation Tools Used:**

**MIL-STD-1840A (TAPE)**

SUN 3/280  
AFCTN *Tapetool v1.2.10* UNIX  
XSoft *CAPS/CALS v40.4*

**MIL-D-28000 (IGES)**

HP 735  
Island Software *IslandDraw v3.0*  
Carberry *CADLeaf v3.1.2*  
SGI Indigo2  
Cadkey *Cadkey v6.0*  
IGES Data Analysis (IDA) *CALSVIEW*  
International TechnneGroup Incorporated  
(ITI) *IGES/Works v2.0*  
Sun SparcStation 2  
Auto-trol *Sk5post S5000 IGES Converter R7.0.1*  
Carberry *CADLeaf Plus v3.1*  
IDA *Parser/Verifier v92*  
IDA *IGESView v3.05*  
International TechnneGroup Incorporated  
(ITI) *IGES/Works v1.3*

**MIL-M-28001 (SGML)**

PC 486/50

Exoterica *XGMLNormalizer v1.2e3.2*  
Exoterica *Validator v2.0 ex1*  
McAfee & McAdam *Sema Mark-it v2.3*  
Public Domain *sgmls*

**MIL-R-28002 (Raster)**

HP 735

Island Software *IslandPaint v3.0*

SGI Indigo2

IDA *CALSVIEW*

SUN SparcStation 2

Carberry *CADLeaf Plus v3.1*

AFCTN *validg4*

AFCTN *xrastb.sun4*

PC 486

Inset Systems *HiJaak Pro*

Expert Graphics *RxHighlight v1.0*

**MIL-D-28003 (CGM)**

HP 735

Carberry *CADLeaf Plus v3.1*

Island Software *IslandDraw v3.0*

SGI Indigo 2

IDA *CALSVIEW*

SUN SparcStation 2

Auto-trol *Sk5cgm S5000 CGM Converter R2.0*

Island Software *IslandDraw v4.0*

PC 486/50

Advanced Technology Center

(ATC) *ForView R 1.0*

ATC *MetaCheck R 2.10*

Software Publishing Corporation

(SPC) *Harvard Graphics v3.05*

Inset Systems *HiJaak Pro*

Lotus *Freelance v2.01*

Corel Ventura Publisher

**Standards**

**Tested:**

MIL-STD-1840A

MIL-D-28000A

MIL-M-28001A

MIL-R-28002A

MIL-D-28003

### 3. 1840A Analysis

#### 3.1 External Packaging

The tapes arrived at the Air Force CALS Test Bed (AFCTB) enclosed in boxes in accordance with ASTM D 3951. The exterior of the boxes were marked with a magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tapes were enclosed in barrier bags as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reels showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the boxes were packing lists showing all files recorded on the tapes.

#### 3.2 Transmission Envelope

The 9-track tapes received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

##### 3.2.1 Tape Formats

Both tapes were tested using the AFCTN *Tapetool v1.2.10* utility. No errors were encountered while evaluating the contents of the tape labels.

The tapes were read using XSoft's *CAPS read1840A* utility without any reported errors.

The submitted tapes meet the requirements defined in ANSI X3.27 and MIL-STD-1840A for physical structure.

##### 3.2.2 Declaration and Header Fields

No errors were found in the Document Declaration files or data file headers. These portions of the tapes meet the requirements defined in MIL-STD-1840A for CALS headers.

#### 4. IGES Analysis

The AFCTB has several tools for viewing IGES files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The tapes contained one IGES file. This file was evaluated using IDA's **parser/verifier** set for CALS Class I. This utility reported no CALS errors. The start sections contained the required conformance statement.

The file was converted using a utility available within the AFCTB, with no reported errors. The resulting file was read into Island Software's **IslandDraw**, displayed and printed without a reported error. It was noted that the file displayed on the left side of the screen. The remainder of the file was located off the page to the left. The origin point of this file was found to be a negative value (X -3.13; Y- .86). An undocumented feature of the translator was used to create a complete image.

The file was converted using Auto-trol's **Sk5post** utility without a reported error. The resulting file, when displayed, appeared to be complete.

The file was converted using Cadkey's **ig2c** utility. The resulting file was read into Cadkey's **Cadkey**, displayed and printed. No errors were noted.

The file was read into Carberry's **CADLeaf** software without a reported error. The file displayed in the lower left corner of the screen. When the Bound Data option was used during the import, a complete image was displayed and printed.

The file was read using IDA's **IGESView**, **IGESView for Windows**, and **CALSTView**. No errors were noted.

The file was read using ITI's **IGESWorks** without a reported error. The files were displayed and printed.

The IGES file was converted using Rosetta Technologies' **Prepare** with a reported warning for level of precision. The

resulting file was read into Rosetta Technologies' **Preview**, displayed and printed.

The IGES file meets the CALS MIL-D-28000A, Amendment One, specification.

## 5. SGML Analysis

The AFCTB has several parsers available for evaluating submitted DTD and text files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. These products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings unless specified in the report. Changes to DTD or text files required by each system are not documented in the report.

The two tapes contained two DTDs, two text, and two Format Output Specification Instance (FOSI) files.

The first tape contained a DTD which consisted of token references. The tape was analyzed as described in the following paragraphs.

The text and DTD files tape were evaluated using a parser available within the AFCTB. No errors or warnings were issued during the parsing of these files. It was necessary to increase the GRPCNT parameter in order to complete the parsing operation.

The text and DTD files were evaluated using the Exoterica **XGMLNormalizer** parser. This parser reported no errors or warnings.

The text and DTD files were tested using the Exoterica **Validator ex1** parser. The following warning was issued by this tool:

```
<!-- **Warning** in "i:\94094\ta01.txt", line 1:
  There is no element with an IDREF or IDREFS attribute value equal to
  a specified ID value.
  The unreferenced ID attribute value is "X0".
-->
```

---



The text and DTD files were evaluated using McAfee & McAdam's **Sema Mark-it v2.3** parser. No errors or warnings were issued by this tool.

The text and DTD files were evaluated using the Public Domain **sgmls** parser. No errors or warnings were issued by this utility. It was necessary to increase the GPPCNT parameter in order to complete the parsing operation.

The second tape contained a "normal" DTD with a text file that referenced the included graphics files. It was analyzed as described in the following paragraphs.

The text and DTD files were evaluated using a parser available within the AFCTB. No errors or warnings were issued during the parsing process.

The text and DTD files were evaluated using the Exoterica **XGMLNormalizer** parser. This parser reported no errors and three warnings. The warnings were mixed content models for elements "ENTRY", "NOTICE" and "RESULT".

The text and DTD files were tested using the Exoterica **Validator ex1** parser. Four warnings were issued by this tool for mixed content models.

The text and DTD files were evaluated using McAfee & McAdam's **Sema Mark-it v2.3** parser. No errors or warnings were issued by this tool.

The text and DTD files were evaluated using the Public Domain **sgmls** parser. No errors or warnings were issued by this utility.

The DTD and text files were imported into a software available within the AFCTB. The DTD was parsed and generated three mixed content model warnings. Because the FOSI file could not be imported nothing was published.

No errors were reported in any of the DTD or text files from either tape. The files meet the CALS MIL-M-28001A specification.

## 6. Raster Analysis

The AFCTB has several tools for viewing Raster files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The tapes contained one Raster file. This file was evaluated using the AFCTN **validg4** utility. This program reported that the file meets the CALS MIL-R-28002A specification.

The file was read into the AFCTN **xrastb.sun4** viewing utility. No problems were noted.

The file was converted using a utility available within the AFCTB, without a reported error. The resulting file was read into Island Software's **IslandPaint** and displayed.

The Raster file was read into Carberry's **CADLeaf** software without a reported error. The image was displayed with no noted errors.

The file was read using IDA's **CALSVIEW** without a reported error.

The file was read into IDA's **IGESView** and **IGESView for Windows** without a reported error and displayed.

The file was read into and displayed using Inset Systems' **HiJaak for Windows** without a reported error.

The Raster file was converted using Rosetta Technologies' **Prepare** without a reported error. The resulting file was read into Rosetta Technologies' **Preview** and displayed.

The Raster file was imported into Expert Graphics' **RxHighlight** and displayed without a reported error.

The Raster file meets the CALS MIL-R-28002A specification.

---

## 7. CGM Analysis

The tapes contained one CGM file. The file was evaluated using ATC's **MetaCheck** with CALS options. This utility reported no errors in the file.

The CGM file was evaluated using the beta AFCTN **validcgm** utility, with reported errors.

The AFCTB has several tools for viewing CGM files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The CGM file was converted using a utility available within the AFCTB, without a reported error. The resulting file was read into Island Software's **IslandDraw v3.1**, displayed and printed. File C002 contained text overflow.

The CGM file was converted using Auto-trol's **sk5cgm** utility without a reported error. When the resulting file was displayed, it appeared as a solid mass of color and lines.

The file was read into Carberry's **CADLeaf** software and displayed. File C002 contained text overflow. When the proportional font option was selected, most text was displayed within the defined boundaries. However, in two blocks the text still overflowed into the next block.

The file was read into IDA's **CALSVIEW**. File C002 contained text overflow in many blocks along with the restricted text block.

An attempt to import the file into ATC's **ForView** caused a General Protection error message.

An attempt to import the file into Lotus' **Freelance** caused a General Protection error message.

The file was imported into SPC's **Harvard Graphics v3.05** with reported errors. The errors were line style errors, indi-

vidual points adjusted so they will appear on the screen, non-CGM object encountered, and objects not translated. The resulting image was not usable.

When an attempt was made to read into Inset Systems' **HiJaak Pro**, the file generated a Real Precision Not Supported error message.

The file was imported directly into Island Software's **IslandDraw v4.0** without a reported error. Text overflow in the restricted text block, and errors in the Elliptical arc blocks were noted.

An attempt to imported the files into Corel's **Ventura Publisher** resulted in errors reported. Nothing was displayed.

The CGM file meets the CALS MIL-D-28003 specification. However, none of the PC based software, available within the AFCTB, was able to successfully read the file. None of the applications displayed a completely correct image. This is because the PC-based software products used in this test do not support the high precision levels (16 digit) required by the submitted CGM file.

## 8. Conclusions and Recommendations

The tape could be read properly using the AFCTN *Tapetool* software without any reported errors or warnings. The physical structure and CALS headers were correct, and this portion of the tape meets the CALS MIL-STD-1840A and ANSI X3.27 requirements.

The IGES file meets the CALS MIL-D-28000A specification.

The SGML files meet the CALS MIL-M-28001A specification.

The Raster file meets the CALS MIL-R-28002A specification.

The CGM file meets the CALS MIL-D-28003 specification. However, most of the software tools, available within the AFCTB, could not correctly display the images.

The tape submitted by Northrop Corporation meets the CALS MIL-STD-1840A requirements.

## 9. Appendix A - Tapetool Report Logs

### 9.1 Tape Catalog - Tape One

CALS Test Network Catalog Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Sat Jul 2 12:47:39 1994

MIL-STD-1840A File Catalog

File Set Directory: /cals/u1210/Set080

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000001	Extracted
D001G002	DTD	D/00260	02048/000003	Extracted
D001H003	Output Specification	D/00260	02048/000016	Extracted

Catalog Process terminated normally.

---

## 9.2 Tape Evaluation Log - Tape One

CALS Test Network Tape Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Sat Jul 2 12:47:35 1994

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01

CONTROLLER

4

Label Identifier: VOL1  
Volume Identifier: ITDS01  
Volume Accessibility:  
Owner Identifier:  
Label Standard Version: 4

HDR1D001

ITDS0100010001000100 94177 94177 000000 CONTROLLER

Label Identifier: HDR1  
File Identifier: D001  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0001  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 94177  
Expiration Date: 94177  
File Accessibility:  
Block Count: 000000  
Implementation Identifier: CONTROLLER

<<<< PART OF LOG FILE REMOVED HERE >>>>

##### End of Volume ITDS01 #####  
##### End Of Tape File Set #####

Deallocating /dev/rmt0...

Tape Import Process terminated normally.

### 9.3 Tape File Set Validation Log - Tape One

CALS Test Network File Set Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Sat Jul 2 12:47:40 1994

MIL-STD-1840A File Set Evaluation Log

File Set: Set080

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division,  
L591/UB, 8900 E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: STPRO25.2.4

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19940625

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT,  
TechnCenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: STPRO25.2.4

dstrelid: NONE

dtetrn: 19940626

dlvacc: NONE

filcnt: T1, H1, G1

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: TEST DOCUMENT

docttl: Test document STPRO25.2.4

Found file: D001T001

Extracting Text Header Records...

Evaluating Text Header Records...

srcdocid: STPRO25.2.4

dstdocid: STPRO25.2.4

txtfilid: W

doccls: U

notes: NONE

Saving Text Header File: D001T001\_HDR

Saving Text Data File: D001T001\_TXT



Found file: D001G002  
Extracting DTD Header Records...  
Evaluating DTD Header Records...

srcdocid: STPRO25.2.4  
dstdocid: STPRO25.2.4  
notes: NONE

Saving DTD Header File: D001G002\_HDR  
Saving DTD Data File: D001G002\_DTD

Found file: D001H003  
Extracting Output Specification Header Records...  
Evaluating Output Specification Header Records...

srcdocid: STPRO25.2.4  
dstdocid: STPRO25.2.4  
notes: NONE

Saving Output Specification Header File: D001H003\_HDR  
Saving Output Specification Data File: D001H003\_OS

Evaluating numbering scheme...  
No errors were encountered during numbering scheme evaluation.  
Numbering scheme evaluation complete.

Checking file count...  
No errors were encountered during file count verification.  
File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

## 9.4 Other Tape Reading Logs - Tape One

```
/cals/caps/Bin/read1840A: --- Read declaration file 'D001      ' ---  
/cals/caps/Bin/read1840A: writing data file 'aftb9494a/STPRO2524/W.T.sgm'.  
/cals/caps/Bin/read1840A: writing data file 'aftb9494a/STPRO2524/  
STPRO2524.G.dtd'.  
/cals/caps/Bin/read1840A: writing data file 'aftb9494a/STPRO2524/  
STPRO2524.H.out'.  
-- declaration file indicates 1 files of type T  
-- declaration file indicates 1 files of type G  
-- declaration file indicates 1 files of type H  
-- declaration file indicates 0 files of type Q  
-- declaration file indicates 0 files of type R  
-- declaration file indicates 0 files of type C  
-- declaration file indicates 0 files of type X  
-- declaration file indicates 0 files of type P  
-- declaration file indicates 0 files of type Z
```

## 9.5 Tape Catalog - Tape Two

CALS Test Network Catalog Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Sat Jul 2 12:53:59 1994

MIL-STD-1840A File Catalog

File Set Directory: /cals/u1210/Set081

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000002	Extracted
D001C002	CGM	F/00080	00800/000006	Extracted
D001R003	Raster	F/00128	02048/000019	Extracted
D001Q004	IGES	F/00080	02000/000012	Extracted
D001G005	DTD	D/00260	02048/000010	Extracted
D001H006	Output Specification	D/00260	02048/000061	Extracted

Catalog Process terminated normally.

---

## 9.6 Tape Evaluation Log - Tape Two

CALS Test Network Tape Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Sat Jul 2 12:53:47 1994

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01

CONTROLLER

4

Label Identifier: VOL1

Volume Identifier: ITDS01

Volume Accessibility:

Owner Identifier:

Label Standard Version: 4

HDR1D001

ITDS0100010001000100 94177 94177 000000 CONTROLLER

Label Identifier: HDR1

File Identifier: D001

File Set Identifier: ITDS01

File Section Number: 0001

File Sequence Number: 0001

Generation Number: 0001

Generation Version Number: 00

Creation Date: 94177

Expiration Date: 94177

File Accessibility:

Block Count: 000000

Implementation Identifier: CONTROLLER

<<<< PART OF LOG FILE REMOVED HERE >>>>

##### End of Volume ITDS01 #####

##### End Of Tape File Set #####

Deallocating /dev/rmt0...

Tape Import Process terminated normally.

## 9.7 Tape File Set Validation Log - Tape Two

CALS Test Network File Set Evaluation - Version 1.2; Release 10 (C)

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Sat Jul 2 12:53:59 1994

MIL-STD-1840A File Set Evaluation Log

File Set: Set081

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division,  
L591/UB, 8900 E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: STPRO25.2.5

srcrelid: NONE

chglvl: ORIGINAL

dteis: 19940625

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT,  
TechneCenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: STPRO25.2.5

dstrelid: NONE

dtetrn: 19940626

dlvacc: NONE

filcnt: T1, H1, G1, C1, Q1, R1

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: TEST DOCUMENT

docttl: Test document STPRO25.2.5

Found file: D001T001

Extracting Text Header Records...

Evaluating Text Header Records...

srcdocid: STPRO25.2.5

dstdocid: STPRO25.2.5

txtfilid: W

doccls: U

notes: NONE

Saving Text Header File: D001T001\_HDR

Saving Text Data File: D001T001\_TXT

Found file: D001C002  
Extracting CGM Header Records...  
Evaluating CGM Header Records...

srcdocid: STPRO25.2.5  
dstdocid: STPRO25.2.5  
txtfilid: W  
figid: NONE  
srcgph: calcs.cgm  
doccls: U  
notes: NONE

Saving CGM Header File: D001C002\_HDR  
Saving CGM Data File: D001C002\_CGM

Found file: D001R003  
Extracting Raster Header Records...  
Evaluating Raster Header Records...

srcdocid: STPRO25.2.5  
dstdocid: STPRO25.2.5  
txtfilid: W  
figid: NONE  
srcgph: test1.ras  
doccls: U  
rtype: 1  
rorient: 000,270  
rpelcnt: 002560,002048  
rdensty: 0300  
notes: NONE

Saving Raster Header File: D001R003\_HDR  
Saving Raster Data File: D001R003\_GR4

Found file: D001Q004  
Extracting IGES Header Records...  
Evaluating IGES Header Records...

srcdocid: STPRO25.2.5  
dstdocid: STPRO25.2.5  
txtfilid: W  
figid: NONE  
srcgph: apple2d.igs  
doccls: U  
notes: NONE

Saving IGES Header File: D001Q004\_HDR  
Saving IGES Data File: D001Q004\_IGS

Found file: D001G005  
Extracting DTD Header Records...  
Evaluating DTD Header Records...

srcdocid: STPRO25.2.5  
dstdocid: STPRO25.2.5  
notes: NONE

Saving DTD Header File: D001G005\_HDR  
Saving DTD Data File: D001G005\_DTD

Found file: D001H006  
Extracting Output Specification Header Records...  
Evaluating Output Specification Header Records...

srcdocid: STPRO25.2.5  
dstdocid: STPRO25.2.5  
notes: NONE

Saving Output Specification Header File: D001H006\_HDR  
Saving Output Specification Data File: D001H006\_OS

Evaluating numbering scheme...  
No errors were encountered during numbering scheme evaluation.  
Numbering scheme evaluation complete.

Checking file count...  
No errors were encountered during file count verification.  
File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

## 9.8 Other Tape Reading Logs - Tape One

```
/cals/caps/Bin/read1840A: --- Read declaration file 'D001      ' ---  
/cals/caps/Bin/read1840A: writing data file 'aftb9494b/STPRO2525/W.T.sgm'.  
/cals/caps/Bin/read1840A: writing data file 'aftb9494b/STPRO2525/  
calscgm.C.cgm'.  
/cals/caps/Bin/read1840A: writing data file 'aftb9494b/STPRO2525/  
testlras.R.cci'.  
/cals/caps/Bin/read1840A: writing data file 'aftb9494b/STPRO2525/  
apple2digs.Q.igs'.  
/cals/caps/Bin/read1840A: writing data file 'aftb9494b/STPRO2525/  
STPRO2525.G.dtd'.  
/cals/caps/Bin/read1840A: writing data file 'aftb9494b/STPRO2525/  
STPRO2525.H.out'.  
-- declaration file indicates 1 files of type T  
-- declaration file indicates 1 files of type G  
-- declaration file indicates 1 files of type H  
-- declaration file indicates 1 files of type Q  
-- declaration file indicates 1 files of type R  
-- declaration file indicates 1 files of type C  
-- declaration file indicates 0 files of type X  
-- declaration file indicates 0 files of type P  
-- declaration file indicates 0 files of type Z
```



---

## 10. Appendix B - Detailed IGES Analysis

### 10.1 File D001Q004

#### 10.1.1 Parser/Verifier Log

```
*****
***** IGES PARSE/VERIFIER *****
***** MARCH 1993 *****
***** IGES Data Analysis *****
***** (708) 344-1815 *****
*****
```

Input file is q004.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is July 3, 1994 12:04 AM

```
*****
***** CHECK FILE SYNTAX *****
*****
```

Section	Records
Start	11
Global	3
Directory	82 ( 41 Entities)
Parameter	192
Terminate	1

NITPICK 2489: Excess precision in real constant (3.40941762) for XS of D 3.  
NITPICK 2489: Excess precision in real constant (3.65914916) for YS of D 3.  
NITPICK 2489: Excess precision in real constant (-1.51606821) for Data.Pts[1].X  
of D 7.  
NITPICK 2489: Messages regarding excess precision suppressed.

```
*****
***** SUMMARY AND STATISTICS *****
*****
```

---

\*\*\* File and Product Name Information \*\*\*

File name from sender = 'Q004.iges'  
File creation Date.Time = '940626.085317'  
Model change Date.Time = ''  
Author = 'tom'  
Department = 'GRAPHICS'  
Product name from sender = 'Q004.iges'  
Destination product name = 'Q004.iges'

\*\*\* Parameter Delimiters \*\*\*

Delimiter = ','  
Terminator = ';'

\*\*\* Originating System Data \*\*\*

System ID = 'ITDS CONVERTER: GEF\_IGES'  
Preprocessor version = '1.0'  
Specification version = 6 (IGES 4.0)

\*\*\* Precision levels \*\*\*

Integer bits = 32  
Floating point - Exponent = 38 Mantissa = 6  
Double precision - Exponent = 308 Mantissa = 15

\*\*\* Global Model Data \*\*\*

Model scale = 1.0000E+00  
Unit flag = 1  
Units = 'IN'  
Line weights = 3  
Maximum line thickness = 1.000000E-02  
Minimum line thickness = 3.333333E-03  
Granularity = 1.000000E-03  
Maximum coordinate = 2.862622E+00

Drafting standard applicable to original data is not specified.

\*\*\* Status Flag Summary \*\*\*

Blank status: Visible	41
Blanked	0
Independence: Independent	39
Physically Subordinate	0
Logically Subordinate	2
Totally Subordinate	0

Entity use:   Geometry                   39  
               Annotation                2  
               Definition                0  
               Other                      0  
               Logical/Positional        0  
               2D parametric            0  
               Construction geometry    0  
               Not Specified            0

Hierarchy:   Structure DE applies       0  
               Subordinate DE applies   41  
               Hierarchy property applies 0  
               Not Specified            0

\*\*\* Entity Occurrence Counts \*\*\*

Entity	Form	Level	Count	Type
-----	----	-----	-----	----
106	11	0	24	Copious data - Piecewise planar, linear string(2D linear path)
106	63	0	8	Simple closed planar curve
110	0	0	6	Line
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
410	0	0	1	View - Orthographic parallel

\*\*\* Entity Count by Level \*\*\*

Level	Count
0	41

\*\*\* Labeling Information \*\*\*

0% of the entities are labeled.

Unlabeled       41

\*\*\* Line Fonts Used in Data \*\*\*

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
-	-	-	32	-	6	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

\*\*\* Line Widths Used in Data \*\*\*

Weight	Count	Width
Defaulted	31	(0.0033)
2	10	(0.0067)

\*\*\* Colors Used in Data \*\*\*

Defaulted	3
Red	8
Green	30

\*\*\*\*\*  
\*\*\*\*\* ENTITY ANALYSIS \*\*\*\*\*  
\*\*\*\*\*

\*\*\* Entity type: 106

\*\*\* Entity type: 110

-- 6 lines averaging 1.362549E-01 units --

\*\*\* Entity type: 404

Drawing at D 5 contains 1 views.

Drawing at D 5 contains 0 annotation entities.

WARNING 2492: Undefined line font value (0) specified for D 5.

\*\*\* Entity type: 406

WARNING 2492: Undefined line font value (0) specified for D 3.

\*\*\* Entity type: 410

Scale of view at D 1 is 1.000000E+00.

Orthographic View entity at D 1 has 0 clipping planes specified.

XMIN = Not Set XMAX = Not Set

YMIN = Not Set YMAX = Not Set

ZMIN = Not Set ZMAX = Not Set

WARNING 2492: Undefined line font value (0) specified for D 1.

\*\*\* Message Summary \*\*\*

2038: 3 Invalid Line font values.

\*\*\* Error Summary \*\*\*

0 fatal errors  
0 severe errors  
0 errors  
3 warnings  
0 cautions  
841 nitpicks  
0 notes

\*\*\* End of Analysis of q004.igs \*\*\*

## 10.1.2 Parser Log - IGESWorks

IGES/Works v1.4.1  
International TechneGroup Incorporated  
Validation Logfile

Date: July 03, 1994  
Model: q004

\*\*\*\*\* Validation Parameters \*\*\*\*\*

### TOLERANCE CONFIGURATION VALUES

-----  
ZERO\_TOL = 1.000000e-13  
MODEL\_SPACE\_PNT\_COIN\_TOL = 1.000000e-03  
PARM\_SPACE\_PNT\_COIN\_TOL = 1.000000e-08  
ISO\_PARM\_CURVE\_TOL = 1.000000e-08  
NON\_CONV\_TOL = 1.000000e-12  
KNOT\_COIN\_TOL = 1.000000e-10  
SAME\_INTER\_TOL = 1.000000e-12  
PARALLEL\_LINES\_TOL = 1.000000e-07  
ANGLE\_COIN\_TOL = 1.000000e-05  
PNT\_PROJ\_TOL = 1.000000e-07  
COLIN\_TOL = 1.000000e-07  
COPLANAR\_TOL = 1.000000e-08  
ZERO\_NORMAL\_TOL = 1.000000e-06  
SAME\_TANGENT\_TOL = 1.000000e-04  
SAME\_CURVATURE\_TOL = 1.000000e-04  
SAME\_DERIVATIVE\_TOL = 1.000000e-03  
MODEL\_LINEAR\_APPROX\_TOL = 2.220446e-16

\*\*\*\*\* Entity Listing Before Validation \*\*\*\*\*

Count	Type	Form	Description
-----	----	----	-----
24	106	11	Planar Piecewise Linear Curve
8	106	63	Simple Closed Planar Curve
6	110	0	Line
1	404	0	Drawing (form 0)
1	406	16	Property (Drawing Size)
1	410	0	View

41 - Number of entities in selection list

\*\*\*\*\* Entity Validation \*\*\*\*\*

\*\*\* Warning (IEVM\_BAD\_COORD\_VALUE) \*\*\*  
(DE 23, TF 106:11) This independent or logically dependent entity had a coordinate value of -3.0019276e+00, which is beyond the maximum coordinate value set in the Global section (at Index 20) of the IGES file. The maximum coordinate value allowed is 2.8626218e+00.

<<<< PART OF LOG FILE REMOVED HERE >>>>

Entity Validation Summary:

Type	Form	Entity Count	Number Valid	Number of Corrected		Number of Uncorrected	
				Warnings	Errors	Warnings	Errors
Global Section		1	1	0	0	0	0
106	11	24	18	0	0	14	0
106	63	8	8	0	0	0	0
110	0	6	5	0	0	2	0
404	0	1	1	0	0	0	0
406	16	1	1	0	0	0	0
410	0	1	1	0	0	0	0
Totals:		42	35	0	0	16	0

The following message was issued and suppressed 11 times:

This independent or logically dependent entity had a coordinate value of %.7e, which is beyond the maximum coordinate value set in the Global section (at Index 20) of the IGES file. The maximum coordinate value allowed is %.7e.

A message is suppressed when it has been issued more than 5 times. This value is controlled by the 'MAX\_MESSAGE' configuration parameter.

\*\*\*\*\*

## 10.2 Error Log - Prepare

ERROR REPORT FOR FILE /novell/94094/q004.igs

>> File record length is 80

Terminate section report :

File Section	#lines
START	11
GLOBAL	3
DIRECTORY ENTRY	82
PARAMETER DATA	192
TERMINATE	1
TOTAL	289

(Expect 80 X 289 = 23120 bytes)

----- preliminary format scan complete -----

>> WARNING: Cannot use maximum power of 10 requested.

: Requested maximum power of 308 using 307.

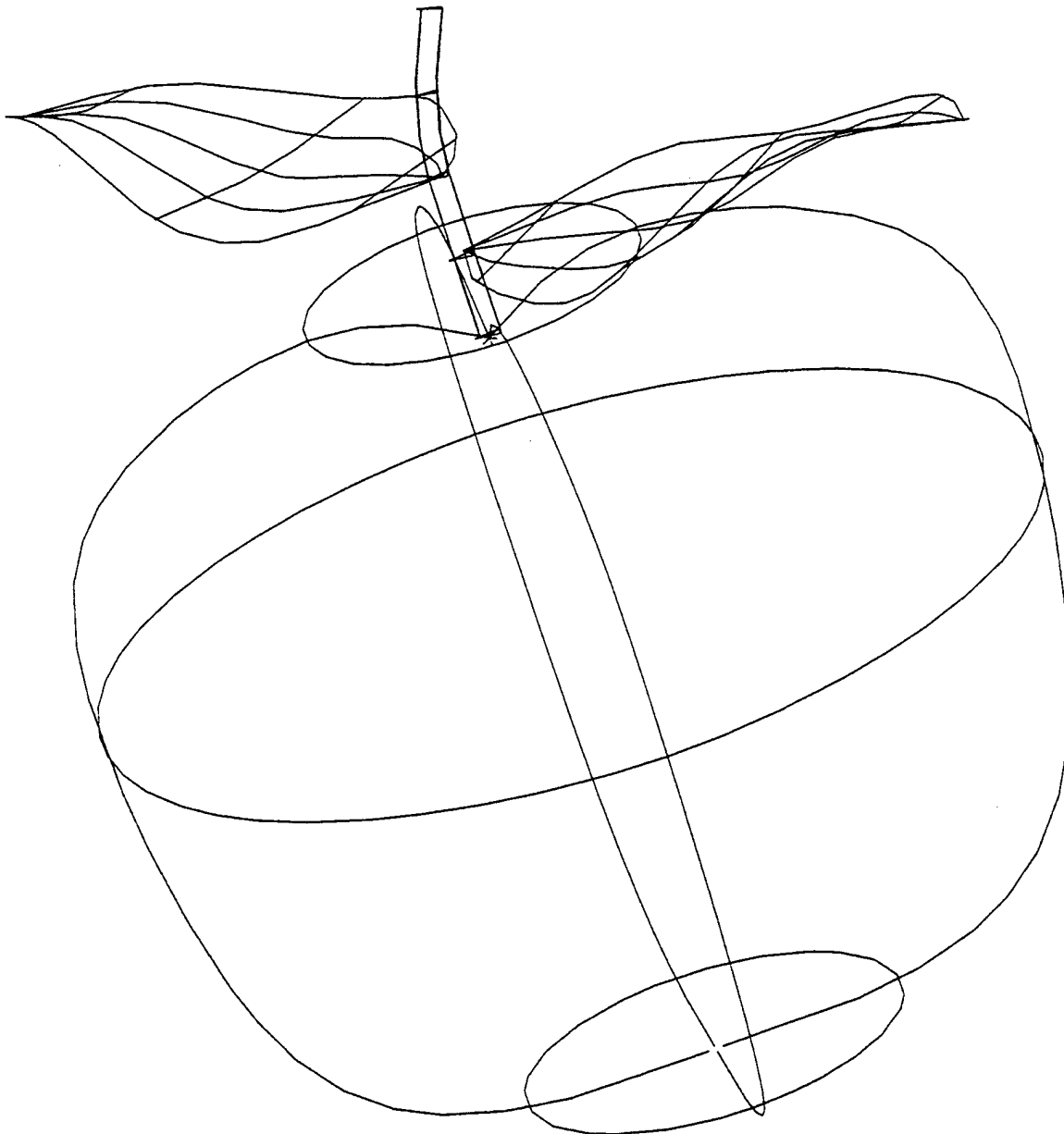
: Field 11 line 2 of GLOBAL section. (Max. Exp. for Double)

308,15,9HQ004.iges,1.0,1,2HIN,3,0.01,13H940626.085317,0.001, G 2^^^

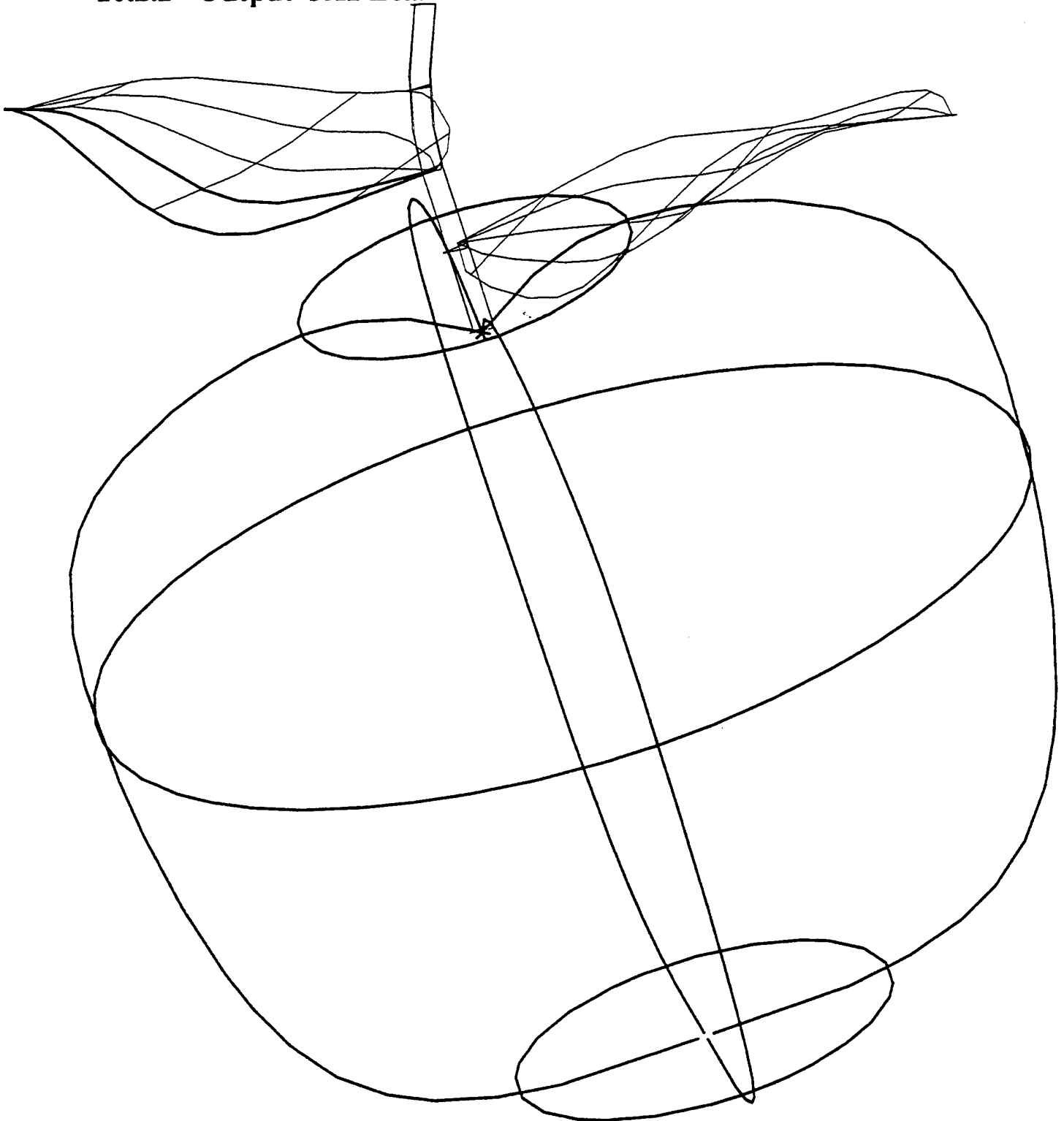
Found 0 errors and 1 warnings



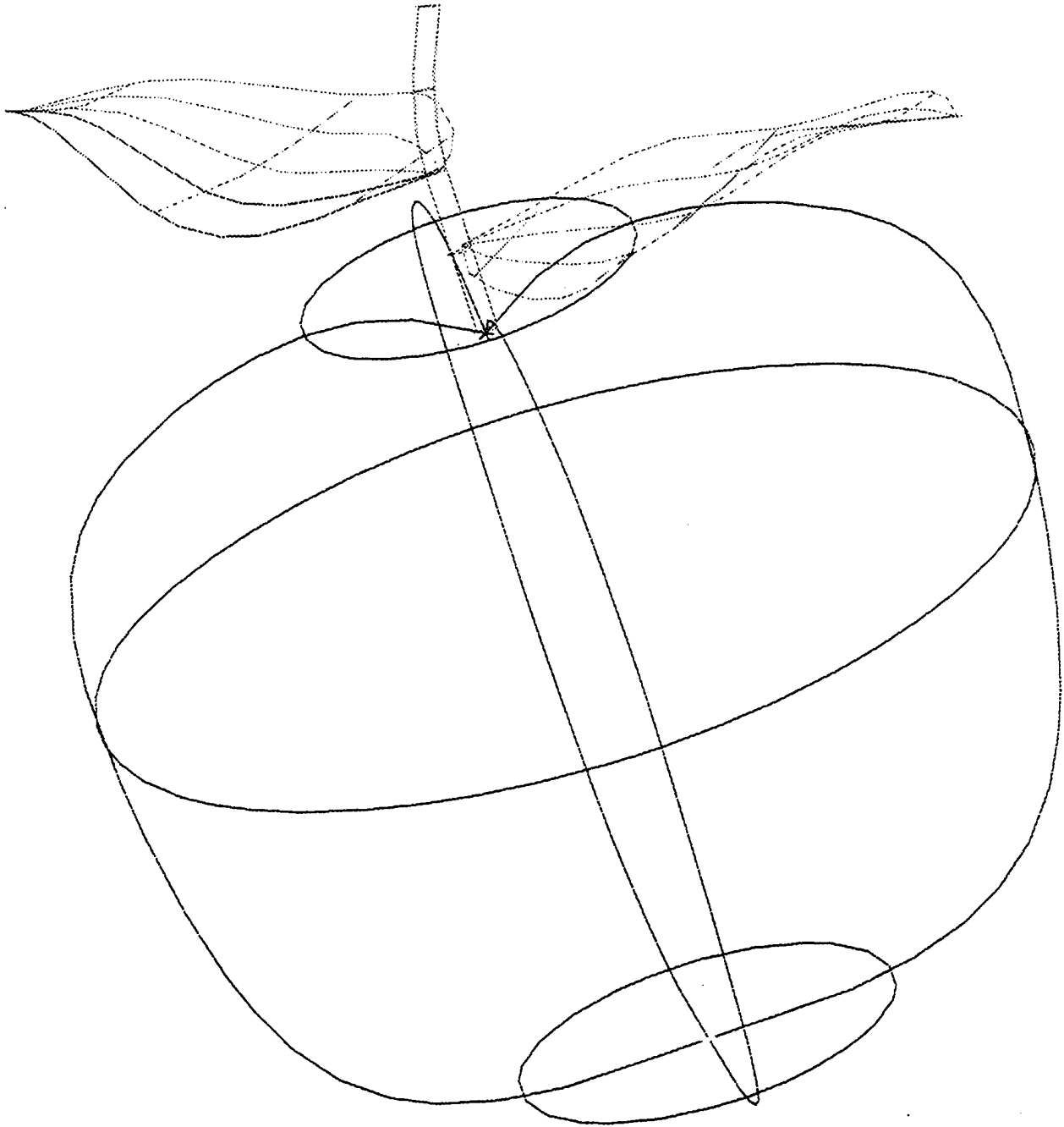
### 10.2.1 Output Cadkey v6.00



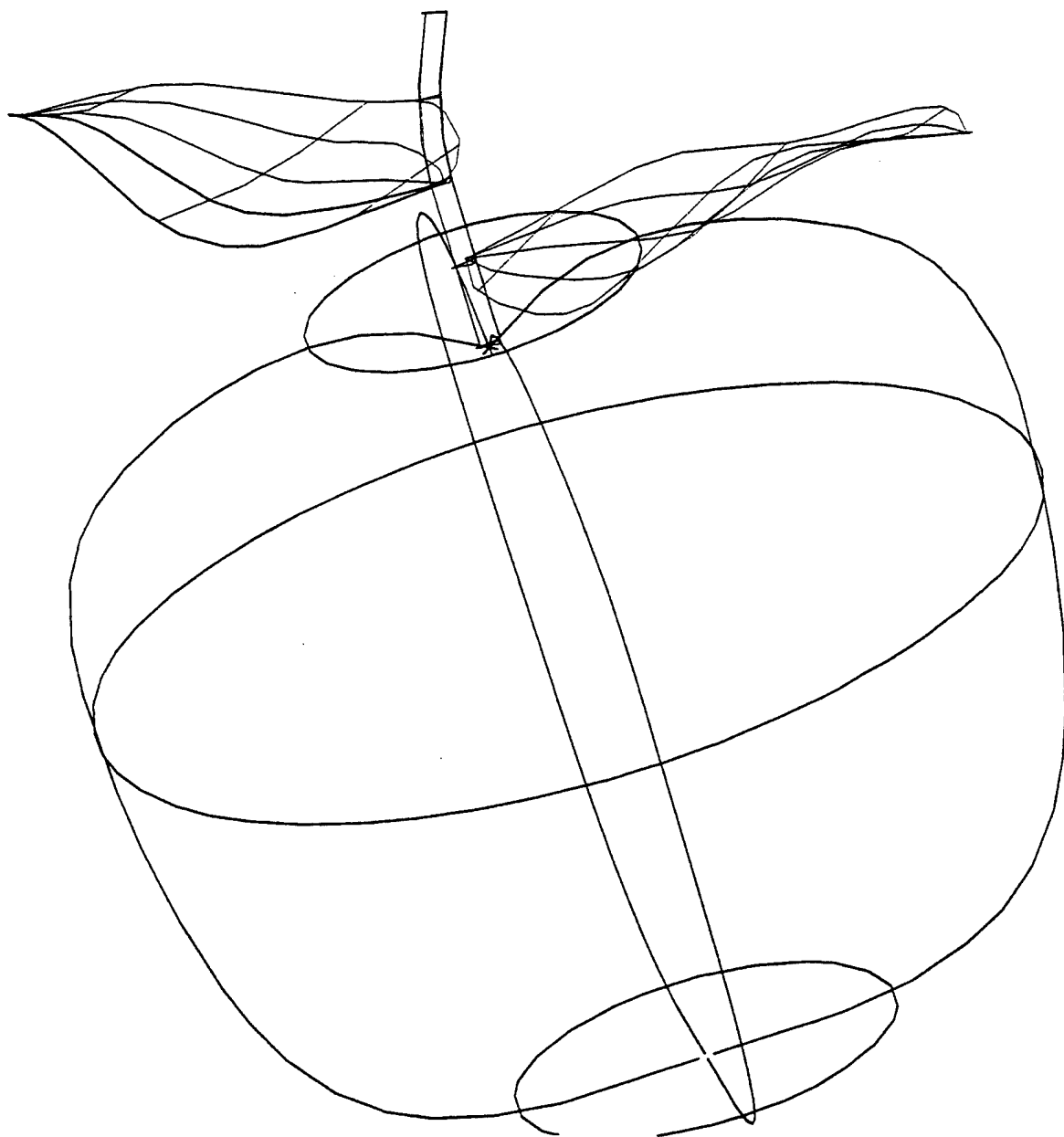
### 10.2.2 Output CADLeaf



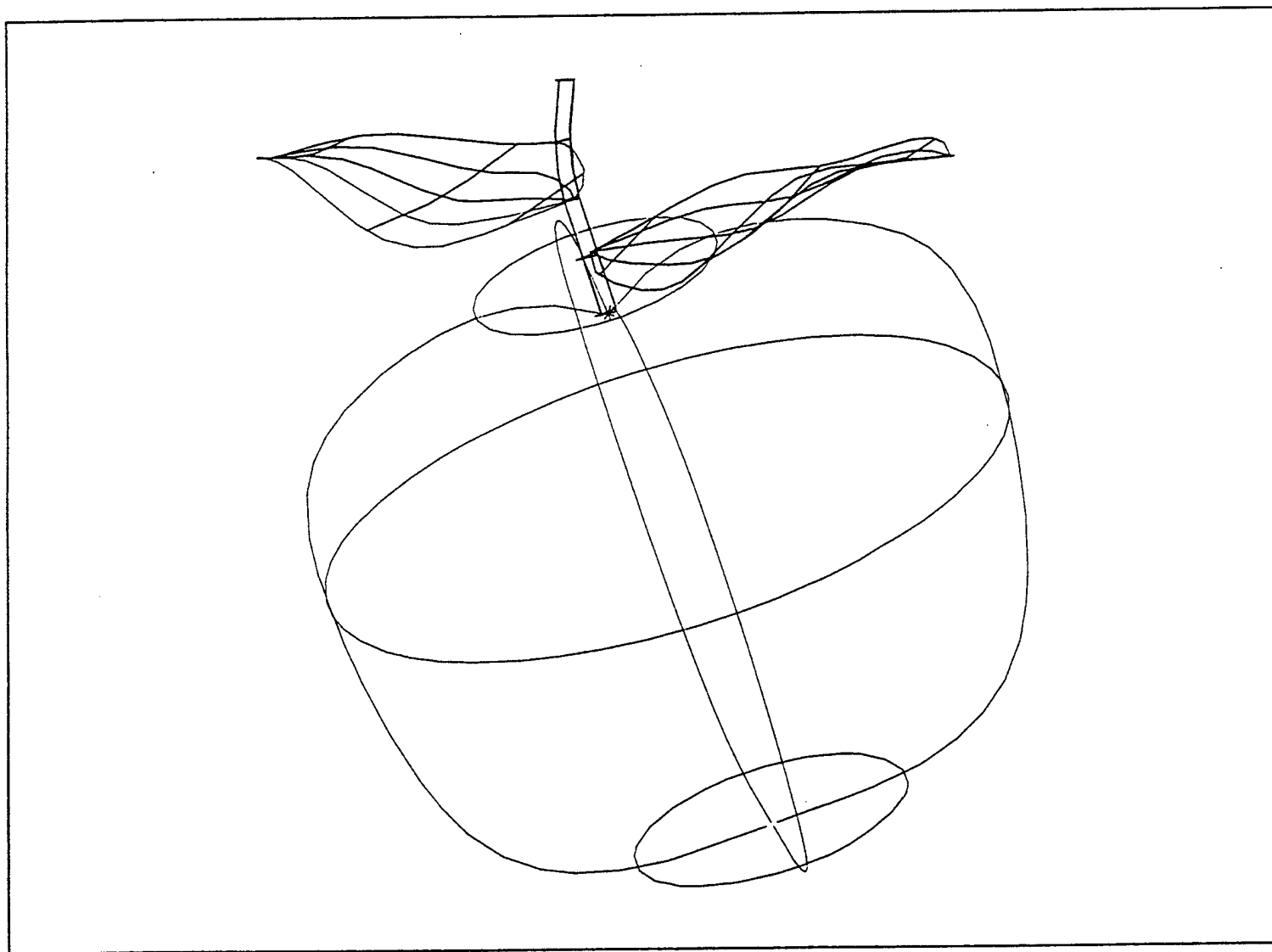
### 10.2.3 Output CALSView



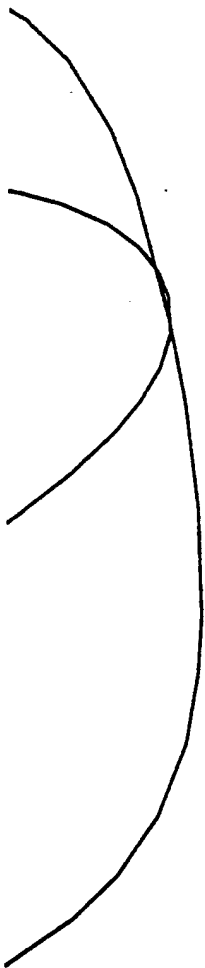
## 10.2.4 Output IGESView



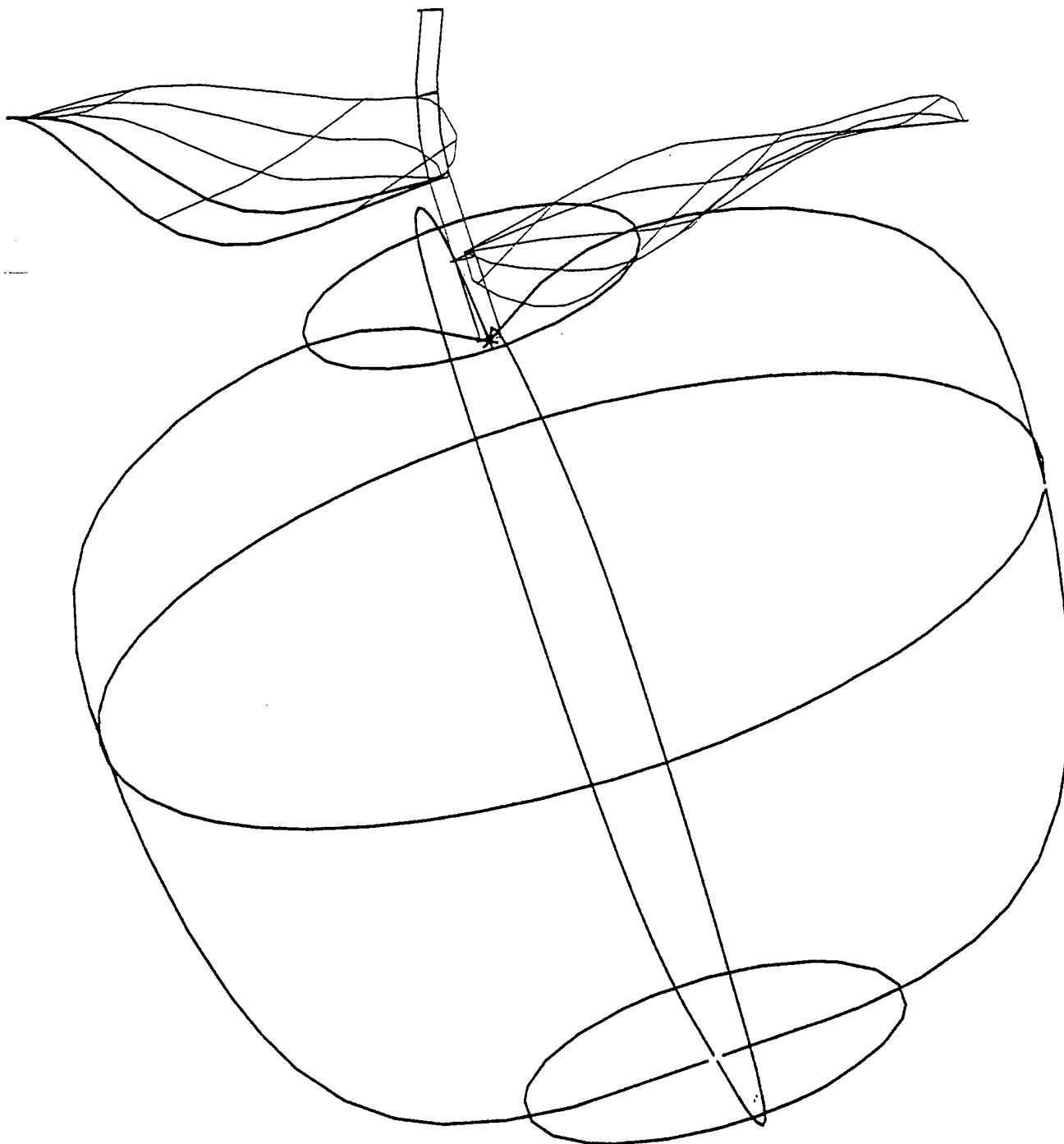
## 10.2.5 Output IGESWorks



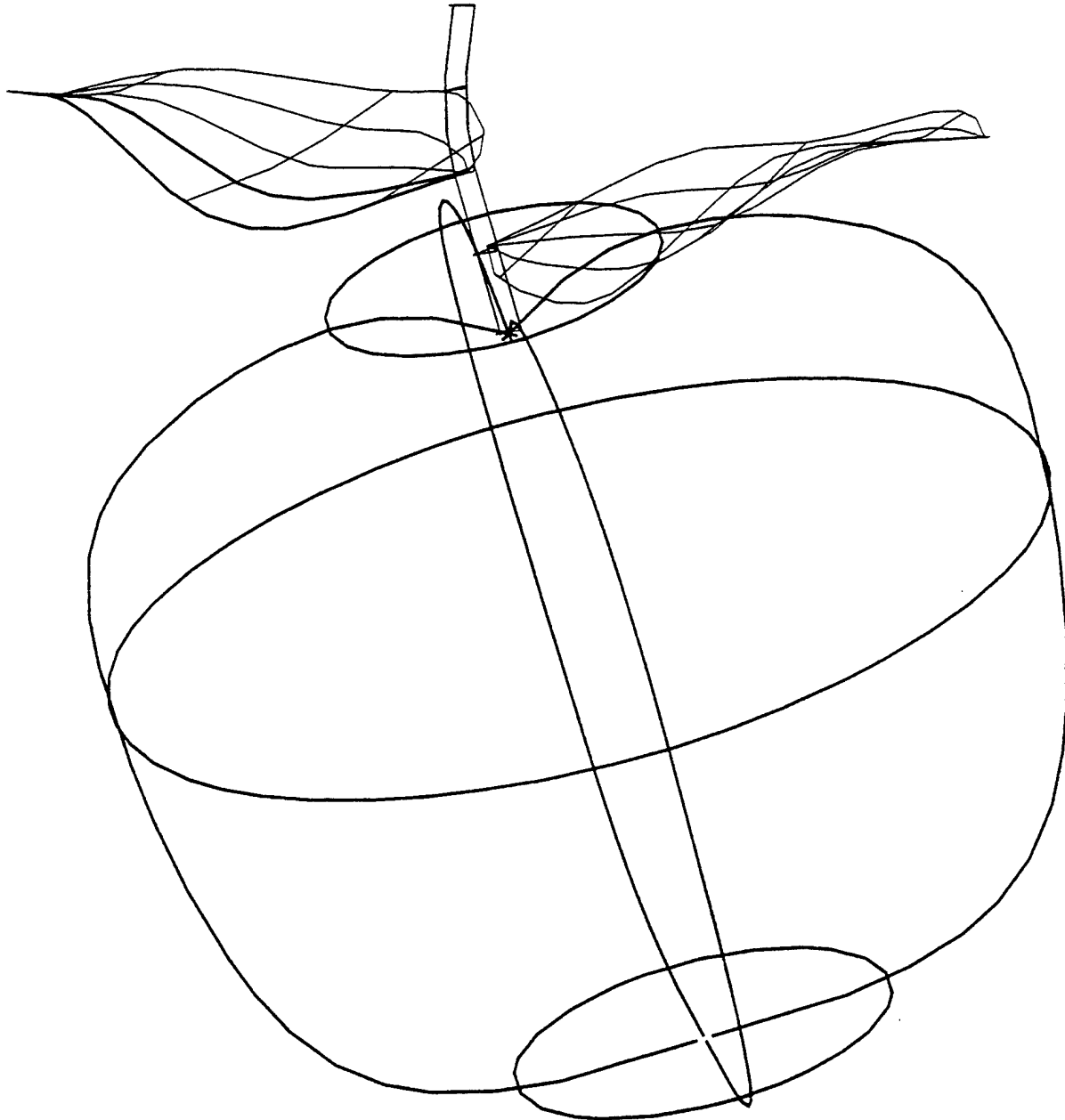
## 10.2.6 Output IslandDraw



### 10.2.7 Output IslandDraw - Bounded data



## 10.2.8 Output Preview





## 11. Appendix C - Detailed SGML Analysis

### 11.1 Tape One

#### 11.1.1 Parser Log

##### 11.1.1.1 DTD

SGML Document Type Definition Parser  
An SGML System Conforming to  
International Standard ISO 8879  
Standard Generalized Markup Language

Log file: '9494a.LOG'  
SDO File: 'calsdtd.sdo'  
Namecase General is yes.  
Namecase Entity is no.  
Parsing DTD file: '9494a.dtd'  
Parsing DOCTYPE DOC

This DTD conforms to the ISO 8879 standard

DTO file '9494a.DTO' created

closing statistics:  
Capacity points: 1192  
Bytes of DTO file string space: 894  
SGML descriptor blocks: 357

Document Type Definition is compliant and parsed normally.

Program status code: 0.

##### 11.1.1.2 Text File

IPA0108: \*\*\* SGML Instance Parser Log File \*\*\*  
Source Document File: 'i:\94094\ta01.txt'.  
Job File: '9494a.jbf'.  
DTD File: ''.  
SGML Declaration File: ''.  
Reading File '9494a.jbf', File Type 'JOB FILE'.

---

Concrete Syntax Settings In Effect For This Parse:

NAMECASE GENERAL: YES.  
NAMECASE ENTITY: NO.  
NAMELEN: 32.  
SHORTTAG: YES.

Closed '9494a.jbf', File Type 'JOB FILE'.

Reading File 'i:\94094\ta01.txt', File Type 'DIRECT INPUT FILE'.

Closed 'i:\94094\ta01.txt', File Type 'DIRECT INPUT FILE'.

Document Parsed Successfully, No Errors or Warnings.

## 11.1.2 Exoterica XGMLNormalizer Parser

No reported errors or warnings.

## 11.1.3 Exoterica Validator exl

```
<!-- **Warning** in "i:\94094\ta01.txt", line 1:
  There is no element with an IDREF or IDREFS attribute value equal to a
  specified ID value.
  The unreferenced ID attribute value is "X0".
-->
<!-- Capacity points/limits:
  TOTALCAP =6988/200000
  ENTCAP   =0/200000
  ENTCHCAP =0/70000
  ELEMCAP  =2784/70000
  GRPCAP   =2880/70000
  EXGRPCAP =32/70000
  EXNMCAP  =32/70000
  ATTCAP   =352/200000
  ATTCHCAP =0/70000
  AVGRPCAP =320/70000
  NOTCAP   =192/70000
  NOTCHCAP =364/70000
  IDCAP    =32/70000
  IDREFCAP =0/70000
  MAPCAP   =0/70000
  LKSETCAP =0/70000
  LKNMCAP  =0/70000
-->
<!-- 1 warning reported. -->
```

### 11.1.4 Sema Mark-it Log

No reported errors or warnings.

### 11.1.5 Public Domain sgmls Log

TOTALCAP 6988  
ENTCAP 0  
ENTCHCAP 0  
ELEMCAP 2784  
GRPCAP 2880  
EXGRPCAP 32  
EXNMCAP 32  
ATTCAP 352  
ATTCHCAP 0  
AVGRPCAP 320  
NOTCAP 192  
NOTCHCAP 364  
IDCAP 32  
IDREFCAP 0  
MAPCAP 0  
LKSETCAP 0  
LKNMCAP 0

## 11.2 Tape Two

### 11.2.1 Parser Log

#### 11.2.1.1 DTD Log

SGML Document Type Definition Parser  
An SGML System Conforming to  
International Standard ISO 8879  
Standard Generalized Markup Language

Log file: '9494b.LOG'  
SDO File: 'calsdtd.sdo'  
Namecase General is yes.  
Namecase Entity is no.  
Parsing DTD file: '9494b.dtd'  
Parsing DOCTYPE DOC

This DTD conforms to the ISO 8879 standard

DTO file '9494b.DTO' created

closing statistics:  
Capacity points: 27456  
Bytes of DTO file string space: 7955  
SGML descriptor blocks: 2994

Document Type Definition is compliant and parsed normally.

Program status code: 0.

#### 11.2.1.2 Text File Log

IPA0108: \*\*\* SGML Instance Parser Log File \*\*\*  
Source Document File: 'i:\94094\9494b.txt'.  
Job File: '9494b.jbf'.  
DTD File: ''.  
SGML Declaration File: ''.

Reading File '9494b.jbf', File Type 'JOB FILE'.

Concrete Syntax Settings In Effect For This Parse:  
NAMECASE GENERAL: YES.

NAMECASE ENTITY: NO.  
NAMELEN: 32.  
SHORTTAG: YES.

Closed '9494b.jbf', File Type 'JOB FILE'.  
Reading File 'i:\94094\9494b.txt', File Type 'DIRECT INPUT FILE'.  
Closed 'i:\94094\9494b.txt', File Type 'DIRECT INPUT FILE'.  
Document Parsed Successfully, No Errors or Warnings.

## 11.2.2 Exoterica XGMLNormalizer Parser

C:\XGML\XGMLNORM.EXE --  
Warning on line 258 in file 9494b.dtd:  
An element with mixed content does not permit data characters everywhere.  
Spaces and line breaks in element 'ENTRY' may be treated as data characters, forcing insertion of markup.

C:\XGML\XGMLNORM.EXE --  
Warning on line 375 in file 9494b.dtd:  
An element with mixed content does not permit data characters everywhere.  
Spaces and line breaks in element 'NOTICE' may be treated as data characters, forcing insertion of markup.

C:\XGML\XGMLNORM.EXE --  
Warning on line 425 in file 9494b.dtd:  
An element with mixed content does not permit data characters everywhere.  
Spaces and line breaks in element 'RESULT' may be treated as data characters, forcing insertion of markup.

## 11.2.3 Exoterica Validator exl

```
<!-- **Warning** in "\xgml\9494b.dtd", line 258:
  An element with mixed content should permit data characters ("PCDATA")
  everywhere.
  The element being declared is "ENTRY".
  <!ELEMENT entry      - o ((warning*,caution*,note*)|%paracon;)>
                                                                    /\
-->
<!-- **Warning** in "\xgml\9494b.dtd", line 375:
  An element with mixed content should permit data characters ("PCDATA")
  everywhere.
  The element being declared is "NOTICE".
```

---

---

```
<!ELEMENT notice - o (para+|%paracon;)>
                                   /\
-->
<!-- **Warning** in "\xgml\9494b.dtd", line 425:
  An element with mixed content should permit data characters ("#PCDATA")
  everywhere.
  The element being declared is "RESULT".
  <!ELEMENT result - o (%text; , faultcode?)>
                                   /\
-->

<!-- **Warning** in "i:\94094\9494b.txt", line 1:
  There is no element with an IDREF or IDREFS attribute value equal to a
  specified ID value.
  The unreferenced ID attribute value is "X4".
-->
<!-- Capacity points/limits:
  TOTALCAP =52358/200000
  ENTCAP   =7744/200000
  ENTCHCAP =3986/70000
  ELEMCAP  =3456/70000
  GRPCAP   =20256/70000
  EXGRPCAP =256/70000
  EXNMCAP  =544/70000
  ATTCAP   =10848/200000
  ATTCHCAP =296/70000
  AVGRPCAP =3840/70000
  NOTCAP   =192/70000
  NOTCHCAP =364/70000
  IDCAP    =480/70000
  IDREFCAP =96/70000
  MAPCAP   =0/70000
  LKSETCAP =0/70000
  LKNMCAP  =0/70000
-->
<!-- 4 warnings reported. -->
```

---

## 11.2.4 Sema Mark-it Log

No reported errors or warnings

## 11.2.5 Public Domain sgmls Log

TOTALCAP 52742  
ENTCAP 7744  
ENTCHCAP 3986  
ELEMCAP 3456  
GRPCAP 20256  
EXGRPCAP 256  
EXNMCAP 544  
ATTCAP 10848  
ATTCHCAP 296  
AVGRPCAP 3840  
NOTCAP 192  
NOTCHCAP 364  
IDCAP 480  
IDREFCAP 480  
MAPCAP 0  
LKSETCAP 0  
LKNMCAP 0

## 12. Appendix D - Raster

### 12.1 Output IGESView

U.S. ARMY MATERIEL COMMAND U.S. ARMY MISSILE COMMAND REDSTONE ARSENAL, ALABAMA				PARTS LIST		PL 10677287 CODE IDENTIFICATION NO. 18876			
TITLE OSCILLATOR, VOLTAGE CONTROLLED-COMO-A3A13			USAMICON ICP 63343	DATE 16 NOV 70	REV -	SHEET 3	OF		
FIND NO.	PART OR IDENTIFICATION NO.	DRAWING OR SPECIFICATION NO.	NOMENCLATURE	QUANTITY	PL	MI	EFFECTIVITY * FROM TO	ZONE *	NOTES OR REMARKS
	10181751-207	10181751	RESISTOR						
	10181751-208	10181751	RESISTOR						
	10181751-209	10181751	RESISTOR						
	10181751-210	10181751	RESISTOR						
	10181751-211	10181751	RESISTOR						
	10181751-212	10181751	RESISTOR						
	10181751-213	10181751	RESISTOR						
	10181751-214	10181751	RESISTOR						
	10181751-215	10181751	RESISTOR						
2	10181752-261	10181752	RESISTOR	1					
3	10181752-357	10181752	RESISTOR	1					
4	10181751-147	10181751	RESISTOR	2					
5	10180306-239	10180306	RESISTOR	2					
6	10181751-133	10181751	RESISTOR	1					
7	10181751-166	10181751	RESISTOR	1					
8	10180328-418	10180328	RESISTOR	1					
9	10181752-283	10181752	RESISTOR	1					
10	10181752-298	10181752	RESISTOR	1					
11	10181752-306	10181752	RESISTOR	1					
12	10181752-297	10181752	RESISTOR	1					
13	10181752-289	10181752	RESISTOR	1					
14	10181752-271	10181752	RESISTOR	1					
15	10181752-310	10181752	RESISTOR	1					
16	10181751-55	10181751	RESISTOR	1					
	10181751-1	10181751	RESISTOR						1
	10181751-2	10181751	RESISTOR						
	10181751-3	10181751	RESISTOR						
	10181751-4	10181751	RESISTOR						
	10181751-5	10181751	RESISTOR						
	10181751-6	10181751	RESISTOR						

NSA FORM 1000, AUG. 1963

\*OPTIONAL



## 13. Appendix E - Detailed CGM Analysis

### 13.1 File D001C002

#### 13.1.1 Parser Log MetaCheck

MetaCheck Version 2.10 -- CGM/MIL-D-28003 Conformance Analyzer  
Copyright 1988-93 CGM Technology Software  
Execution Date: 07/03/94 Time: 12:17:40

Metafile Examined : i:\94094\c002.cgm

Pictures Examined : All  
Elements Examined : All  
Bytes Examined : All

===== Trace Report =====

Tracing not selected.

===== CGM Conformance Violation Report =====

No Errors Detected

===== CALS CGM Profile (MIL-D-28003) Report =====

No profile discrepancies detected.

===== Conformance Summary Report =====

MetaCheck Version 2.10 -- CGM/MIL-D-28003 Conformance Analyzer  
Copyright 1988-93 CGM Technology Software  
Execution Date: 07/03/94 Time: 12:17:43

Name of CGM under test: i:\94094\c002.cgm  
Encoding : Binary

Pictures Examined : All  
Elements Examined : All  
Bytes Examined : All

BEGIN METAFILE string : >C002.cgm<  
METAFILE DESCRIPTION : >NORTHROP B2 ITDS GEF, MIL-D-28003/BA<  
>SIC-1<

---

---

Picture 1 starts at octet offset 200: >Picture 1<

Conformance Summary : This file conforms to the CGM specification.  
This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

1 Pictures Tested  
272 Elements Tested  
3978 Octets Tested

=====  
| No Errors Were Detected |  
=====

===== End of Conformance Report =====

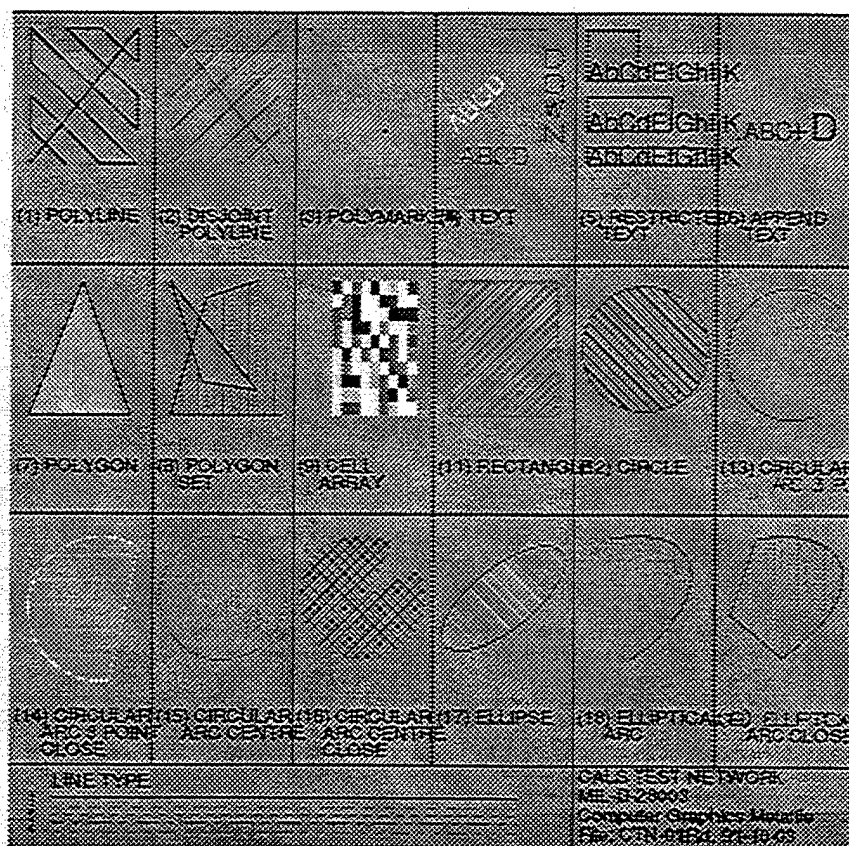
### 13.1.2 validcgm Log

Analysis for file c002.cgm using table table  
ERROR: illegal in this state (2), std B  
ERROR: required precursor (0, 4) not yet seen  
(14.1, 0) (3, 6, 2) Clip Indicator OFF  
MILSPEC 28003 error: illegal hatch index  
(173, 2352) (5, 24, 2) Hatch Index 6  
(0, 1) occurred 1 time  
(0, 2) occurred 1 time  
(0, 3) occurred 1 time  
(0, 4) occurred 1 time  
(0, 5) occurred 1 time  
(1, 1) occurred 1 time  
(1, 2) occurred 1 time  
(1, 3) occurred 1 time  
(1, 4) occurred 1 time  
(1, 5) occurred 1 time  
(1, 6) occurred 1 time  
(1, 7) occurred 1 time  
(1, 8) occurred 1 time  
(1, 9) occurred 1 time  
(1, 10) occurred 1 time  
(1, 11) occurred 1 time  
(1, 12) occurred 1 time  
(1, 13) occurred 1 time  
(2, 2) occurred 1 time  
(2, 6) occurred 1 time  
(2, 7) occurred 1 time

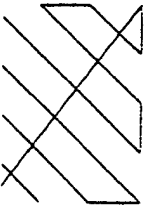
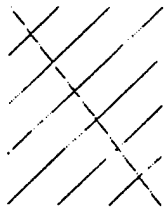
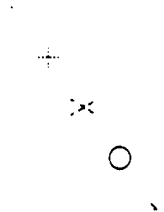
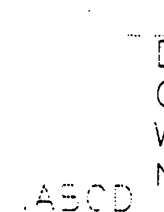
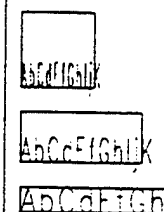
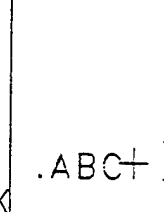
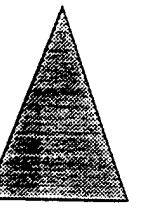
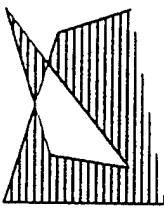

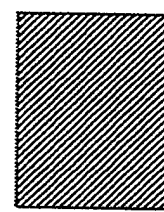
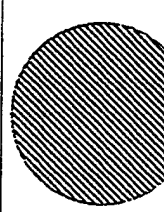
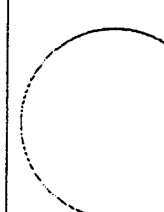
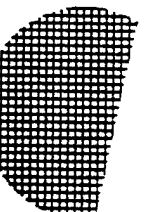


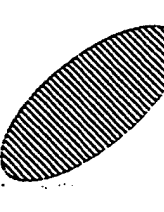

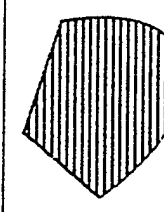
(3, 2) occurred 1 time  
(3, 6) occurred 1 time  
(3, 6) occurred illegally 1 time  
(4, 1) occurred 32 times  
(4, 3) occurred 5 times  
(4, 4) occurred 50 times  
(4, 7) occurred 3 times  
(4, 9) occurred 1 time  
(4, 12) occurred 2 times  
(4, 15) occurred 3 times  
(4, 16) occurred 2 times  
(4, 17) occurred 2 times  
(4, 18) occurred 2 times  
(4, 19) occurred 1 time  
(5, 2) occurred 17 times  
(5, 3) occurred 17 times  
(5, 4) occurred 17 times  
(5, 6) occurred 5 times  
(5, 7) occurred 5 times  
(5, 8) occurred 5 times  
(5, 10) occurred 3 times  
(5, 12) occurred 5 times  
(5, 13) occurred 1 time  
(5, 14) occurred 7 times  
(5, 15) occurred 5 times  
(5, 16) occurred 7 times  
(5, 17) occurred 4 times  
(5, 18) occurred 1 time  
(5, 22) occurred 10 times  
(5, 23) occurred 8 times  
(5, 24) occurred 7 times  
(5, 27) occurred 2 times  
(5, 28) occurred 2 times  
(5, 29) occurred 2 times  
(5, 30) occurred 10 times  
(5, 31) occurred 7 times  
(5, 34) occurred 1 time



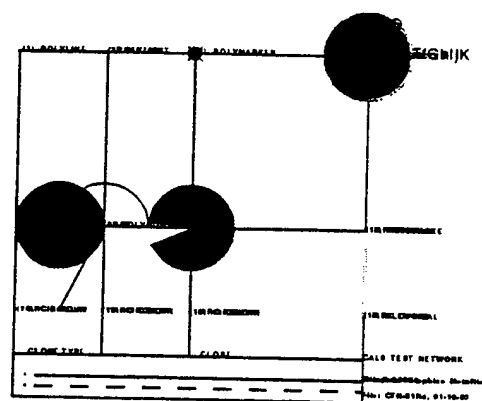
## 13.1.4 Output CALSView



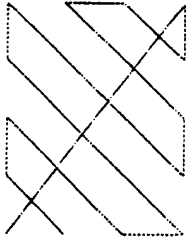
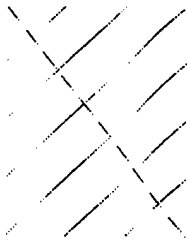


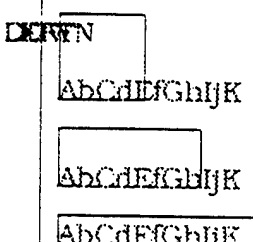

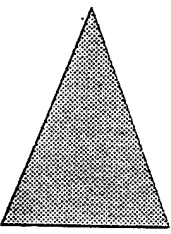
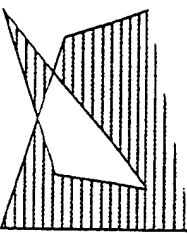
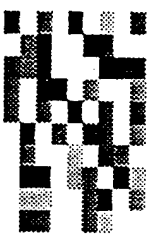
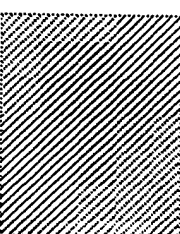
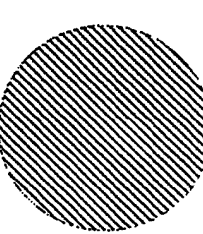
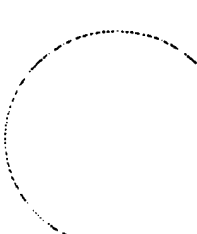
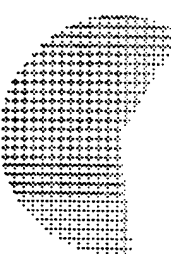
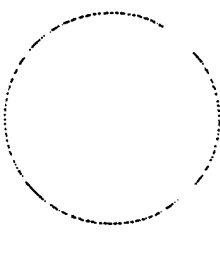
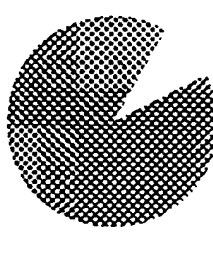
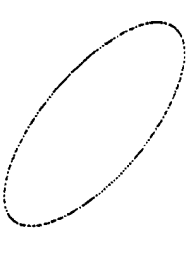

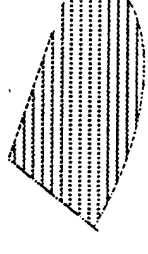
### 13.1.5 Output IslandDraw

					
(1) POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARK	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
					
(7) POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(10) RECTANGLE	(11) CIRCLE	(12) CIRCULAR ARC 3
					
(13) CIRCULAR ARC 3 CLOSE	(14) CIRCULAR ARC POINT	(15) CIRCULAR ARC CENTRE	(16) ELLIPSE CLOSE	(17) ELLIPTICAL ARC	(18) ELLIPTICAL ARC CLOSE
LINE TYPE				CALS TEST NETWORK MIL-D-28003 Computer Graphics Mel File: CTN 01PA 01 10	

## 13.1.6 Output Harvard Graphics



### 13.1.7 Output IslandDraw v4.0

					
(1) POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARKER	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
					
(7) POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(11) RECTANGLE	(12) CIRCLE	(13) CIRCULAR ARC 3 POINT
					
(14) CIRCULAR ARC 3 POINT CLOSE	(15) CIRCULAR ARC CENTRE	(16) CIRCULAR ARC CENTRE CLOSE	(17) ELLIPSE	(18) ELLIPTICAL ARC	(19) ELLIPTICAL ARC CLOSE
<p>LINE TYPE</p> <p>1. ....</p> <p>2. ....</p> <p>3. ....</p> <p>4. ....</p> <p>5. ....</p>				<p>CALS TEST NETWORK</p> <p>MIL-D-28003</p> <p>Computer Graphics Metafile</p> <p>File: CTN-01Rd, 91-10-03</p>	